

2



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,060	09/01/2000	Robert W. Heath JR.	GIGA-001	5498

7590 03/29/2004

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
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Los Angeles, CA 90025

EXAMINER

WAHBA, ANDREW W

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 03/29/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

2

# Office Action Summary

Application No.

09/653,060

Applicant(s)

HEATH ET AL.

Examiner

Andrew W Wahba

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 7, 17, 18, 20-24, 27, 32, 35, 43, 47-49 and 51 is/are rejected.
- 7) ☒ Claim(s) 8-16, 19, 25, 26, 28-31, 33-34, 36-42, 44-46 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 6-49 been renumbered 7-50. The applicant intended to resubmit the original claims (Applicant's Amendments and Response, page 2, lines 2-3), however, several typographical changes have been noted. In the amended claims there are two claims 6 that correspond to claims 6 and 7 in the original claims.

Accordingly, the Office has renumbered the second claims 6 through 49 to claims 7 through 50.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 6, 27, and, 51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With regard to claims 6, 27 and 51, the manner in which "wavelength division

multiple access" and "wavelet division multiple access" pertain to this invention is adequately described in the specification. The Office acknowledges that WDMA is referenced in the Specification as indicated by the applicant (Applicant's Amendments and Response, page 12, lines 22-23). WDMA, however, is employed in optical networks, not wireless communication systems.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3,6,7,17,18,20-24,27,32, 35,43,47-49 and 51 are rejected under 35 U.S.C. 102(e) as being anticipated by Paulraj et al (6,067,290). The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With regard to independent claims 1 and 23, Paulraj et al discloses a decision process 1302 (applicant's mode determination logic, determining) that distinguishes between spatial multiplexing and non-spatial multiplexing (column 32, lines 54-58) for an incoming datastream (applicant's received signal) (column 32, lines 52-53).

With regard to independent claim 43, Paulraj et al discloses a control signal (applicant's control channel) to indicate that spatial configuration is required (column 35, lines 12-13).

With regard to claims 2, 3, 24, 48 and 49, Paulraj et al employs QoS and bit rates (applicant's measured transmission characteristic) to determine (applicant's selecting) whether to employ spatial multiplexing (column 32, line 57). The comparison of a QoS or bit rate to a threshold is inherent (applicant's comparing).

With regard to claims 6, 18, 20, 27, and 51, Paulraj et al discloses traditional communication methods include TDMA, FDMA, CDMA, SDMA and other multiple access protocols known to one skilled in the art (column 7, lines 45-49). Paulraj et al further discloses traditional communication methods including OFDMA, WDMA, and ODMA (column 32, line 42-47).

With regard to claims 7 and 32, Paulraj et al discloses a control signal (applicant's control channel) to indicate that spatial configuration is required (column 35, lines 12-13).

With regard to claims 17, 21, 22 and 35, either the base station or the subscriber unit may determine whether a spatial reconfiguration is necessary (column 11, lines 8-14).

With regard to claim 47, Paulraj et al further discloses a decision process 1302 (applicant's mode determination logic) that distinguishes between spatial multiplexing and non-spatial multiplexing (column 32, lines 54-58) for incoming datastream (applicant's received signal) (column 32, lines 52-53)

***Allowable Subject Matter***

6. Claims 8-16, 19, 25, 26, 28, 29-31, 33-34, 36-42, 44, 45, 46, and 50 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew W Wahba whose telephone number is (703) 305-4684. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

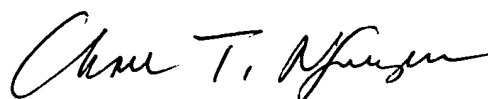
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2661

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew Wahba *AW*

March 9, 2004



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